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ABSTRACT

This report is issued to citizens of Utah to inform them on the progress being made in the state toward the national education goals, established in 1989. Because the goals are "cradle to grave" and cover the preschool years and the afterschool years, the information has been compiled by many state agencies. The report devotes a section for each of the six national goals: (1) readiness for school; (2) high school completion; (3) student achievement and citizenship; (4) science and mathematics; (5) adult literacy and lifelong learning; and (6) safe, disciplined, and drug-free schools. Each section features performance and status information and gives examples of current and emerging Utah programs. In its final section, the report deals with specific programs and planning efforts that are important Utah initiatives but address areas beyond the scope of the national goals. The information presented in this report is intended to establish a baseline for determining progress in subsequent years. (RR)

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SEPTEMBER 1991

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A UTAH PERSPECTIVE on the NATIONAL EDUCATION GOALS

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SEPTEMBER 1991

A UTAH PERSPECTIVE on the NATIONAL EDUCATION GOALS

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STATE OF UTAH

NORMAN H. BANGERTER
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SALT LAKE CITY

At the education summit in Charlottesville, Virginia, in September 1989, President Bush and the governors agreed to establish national education goals and a system to assess and monitor progress toward achieving them. Today, September 30, 1991, the anniversary of the historic education summit, the national education goals panel will issue its first annual education report. The report will focus on national and state progress toward achieving the education goals set in 1990 by the President and the governors. This first progress report will inform the nation on how well we are doing on each of the goals. The governors also agreed to report individually on efforts of their respective states related to their state's performance toward achieving the national goals.

The enclosed report, "A Utah Perspective on the National Goals," is issued to citizens of the state of Utah to inform them on the progress being made in our state toward the national goals. Because the goals are "cradle to grave" and cover the preschool years and the after school years, the information has been compiled from many state agencies. Meeting all of these six goals will require the coordination and work of all state agencies. It provides an opportunity to bring together different agencies and groups to assess state progress and where our state needs to go. The information presented in this report is intended to establish a base line for determining progress in subsequent years. While we have made much progress in Utah toward the achievement of the national goals, we note that there is still much to be done to make these goals a reality for every citizen of our state.

We call your attention to the sections of the report that indicate many of the programs and systems in place to address the national goals. As these and other new programs continue to be implemented, we are confident it will prepare Utah students for the future and the national education goals will be achieved.

Norman H. Bangerter
Governor

Jay B. Taggart
State Superintendent
of Public Instruction

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INTRODUCTION

In 1990, at the Charlottesville Education Summit meeting, the President and the nation's governors adopted six ambitious national education goals. These goals appear as originally written at the Charlottesville Summit on the following page. Subsequent to this action, the National Governor's Association created the National Education Goals Panel to measure and monitor achievement in each of the goal areas.

The National Governor's Association has also encouraged each state to produce a companion report to the national report. Thus, this document provides a Utah perspective on the performance of the state and existing programs in each of the six goal areas. Additionally, Utah has a variety of educational strategic planning initiatives and other reform efforts which are not addressed by the national goals. An effort has been made in this document to provide a flavor of some of these initiatives which are unique to the state.

Utah has in place a wide variety of assessment and accountability programs for public education. Reports from those programs have been widely distributed to the public, the media and the education family. These detailed reports and information are available from each of the agencies cited. This report highlights key findings from many previously published assessment reports and evaluations as well as reporting some new information specifically related to the six national goals. Staff from the Governor's Office, the State Office of Education, the State Department of Health and the State Department of Social Services have been instrumental in providing information for the completion of this document.

Format of the Report. The report addresses each of the six national goals in a major section. Each section features: **(1) performance and status information related to a particular goal and (2) examples of current and emerging Utah programs in each of the goal areas.** It should be stressed that the programs cited are only examples of ongoing statewide efforts and not a complete compendium of all state and district programmatic efforts closely related to each goal.

In its final sections, the report deals with specific programs and planning efforts which are important Utah initiatives but address areas which are beyond the scope of the national goals.

GOALS ESTABLISHED BY THE NATION'S GOVERNORS AT THE CHARLOTTESVILLE EDUCATION SUMMIT

1. All children in America will start school ready to learn.

2. The high school graduation rate will increase to at least 90 percent.

3. American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter including English, mathematics, science, history and geography; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning and productive employment in our modern economy.

4. U.S. students will be first in the world in science and mathematics achievement.

5. Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

6. Every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning.

GOAL 1: READINESS FOR SCHOOL

PRESENT PERFORMANCE/STATUS

Children's Access to Health Care. The Utah Department of Health reports that factors such as low income, lack of insurance, and shortages of health care providers serving certain areas of the state, limit children's access to health care in Utah. It is estimated that in 1990, about 82,000 children in Utah were living below the poverty level. Only about 8,000 children were seen in public health clinics. A 1986 Utah study found that about 92,000 children under the age of 20 lived in families without health insurance. A 1990 study reported that about 30% of the Utah parents of children between 1-2 years of age reported that their children were not adequately immunized.

Prenatal Health. State Health Department statistics demonstrate that the proportion of women receiving prenatal care in the first trimester of pregnancy increased during 1985-89 for all women and for women delivering in the Medicaid program. Adequacy of care also improved. As of 1989, about 5.7% of all births were low birth weight. This percentage has remained essentially constant since 1985. Utah's infant mortality rate has declined steadily since 1985, reaching 7.5 deaths per 1,000 live births in 1990, the lowest level in the history of the state.

Nutritional Status of Children. Children of lower socioeconomic status are at a greater risk of inadequate nutrient intakes and poorer growth. The nutritional picture is complicated by the fact that more and more parents are employed outside of the home which places enormous responsibility upon day-care providers for the nutritional well-being of children.

EXAMPLES OF UTAH PROGRAMS ADDRESSING GOAL 1

The Baby Your Baby Program. This Division of Family Health Services program is multi-faceted and has included: (1) greatly increased funding for providing prenatal care to those in need of financial assistance; (2) a public service outreach campaign consisting of television specials, public service announcements and distribution of printed outreach materials; and (3) the Baby Your Baby hot line, a very effective tool for assisting pregnant women in obtaining timely prenatal care.

Improving Access to Health Care. Clinical services offered through Utah's local health departments are directed primarily toward clients who lack financial or geographic access to needed child care through the private sector. Access has increased by offering medical services for children at low costs. The Division of Family Health Services has expanded the scope of their programs to promote utilization of well-child examinations. This includes intensive media efforts to promote services linked to the Baby Your Baby program.

The Women, Infants and Children (WIC) Program. In promoting enhanced nutrition for children, the WIC program provides a variety of nutrition education activities including informing parents and care-takers of their eligibility for the program, providing information on the nutritional value of supplemental foods provided by the program, and stressing the importance of health care and referrals to other health care programs if needed.

Enhancing the Nutritional Adequacy of Food Provided in Day-care Programs. The Department of Health, in conjunction with the Department of Human Services and the State Office of Education, has been pursuing several avenues to improve nutritional quality of food in day-care programs. These include: (1) establishing child care licensing standards; (2) providing training in child nutrition; and (3) development of manuals to assist care providers in planning nutritious meals.

The Utah Center for Families in Education. The State Office of Education recently opened the Utah Center for Families in Education. An important part of this program involves working with parents of preschool children to help prepare them for school and to begin a positive relationship between parents and the school. The goal of the project is to produce better prepared kindergarten students whose parents have developed a positive relationship with school personnel.

Utah PTA Initiatives in Early Childhood Education. The Utah PTA has promoted numerous programs to enhance the readiness of children for school. These efforts include supporting preschools, early intervention for at-risk students, funding for care of preschool handicapped children, parent training, support of universal immunization, preventative programs in the area of child abuse and initiatives to address child care needs.

Migrant Education. Migrant Education is a federally subsidized program for disadvantaged students of parents who are employed in seasonal agricultural work and must move frequently to follow seasonal farm work activity. The program, while serving all migrant children, emphasizes early childhood education. During the summer of 1990, 327 children from birth to 5 years of age, received a variety of services from the Migrant Education Program. Services provided for these children

were health services (medical and dental), reading readiness, instruction in the English language, social skills activities, and nutritional meals through special lunch and breakfast programs. The Early Childhood Education Services help prepare young migrant children to experience success when they enter elementary school.

Preschool Special Education. All Utah school districts provide preschool special education services to children between the ages of 3 years through kindergarten. Funding is derived from both federal and state sources and at present the program serves over 3,500 disabled children statewide.

The Headstart Program. The federally-funded Headstart Program provides services throughout the state to economically disadvantaged preschool children. The emphasis in the program includes equipping children with school readiness skills, parent training, and delivery of health and dental services and nutrition information.

GOAL 2: HIGH SCHOOL COMPLETION

PRESENT PERFORMANCE/STATUS

Percentage of the Adult Population Holding a High School Diploma. In both 1970 and 1976, Utah was ranked first among the 50 states by the U.S. Census in the percentage of its population over age 25 holding a high school diploma. In 1980, Utah was second- ranked among all 50 states, being surpassed only by Alaska. The percentage of adults holding a high school diploma rose steadily within the state over the decade with 80% holding at least a high school diploma in 1980, compared to 67.3% in 1970.

Median Years of Education. The U.S. Census shows that Utah had the highest median years of education of any state in the nation as of the 1970, 1976 and 1980 Census studies. The Census analysis shows that median years of education for Utah adults increased from 12.5 years to 12.8 years during the decade, while the national median increased from 12.2 to 12.5.

High School Graduation Rates. A report by the Federal Department of Education entitled, "State Education Statistics for 1988-89," estimated Utah's high school graduation rate at 79.4%. This ranked the state 12th among the 50 states and the District of Columbia and compared to an estimated national high school graduation rate of 71.1%.

Dropout Rates. The Utah State Office of Education has estimated the cumulative grade 9-12 dropout rate for the state as just under 10% as of 1989-90. The federally-sponsored High School and Beyond Study computed the national grade 9-12 dropout rate at slightly more than 17% as of 1986. Work continues on both the federal and state levels to refine existing approaches for determining dropout rates.

EXAMPLES OF UTAH PROGRAMS ADDRESSING GOAL 2

Alternative High Schools. Alternative high school programs now exist in many Utah school districts. These programs feature a curriculum tailored to the needs of students who, for a variety of reasons, have not found success in the traditional high school

setting. The alternative high school offers an avenue for high school completion for hundreds of Utah students who previously would have dropped out and not pursued a high school diploma.

Adult Basic and Adult High School Education Programs. As of 1989-90, nearly 25,000 Utah adults attended either adult basic or adult high school education programs. The focus on these programs is to enable growing numbers of Utahns to become self-reliant and productive citizens. In 1990, some 1,257 Utah adults received their high school diplomas through the adult high school education program. This number is the equivalent of about six percent of regular high school graduates for 1990.

The General Education Development Program and Testing Service. For adults who did not complete high school, the tests of General Educational Development (GED) provide an opportunity to earn a high school credential. The GED program enables individuals to demonstrate that they have acquired a level of learning comparable to that of high school graduates. The program is recognized nationwide by employers and institutions of higher education. During 1990, some 4,724 Utahns completed the GED. Some 3,226 of these individuals met the score requirements to obtain a high school equivalency certificate. The 3,226 successful test-takers represents a number which is equal to almost 15% of regular high school graduates in the state.

The Youth In Custody Program. Due to a variety of reasons including neglect, abuse, abandonment or for conviction of a criminal offense, thousands of Utah young people become involved in the Youth in Custody program. This program has developed a multi-faceted education model which centers on effective socially-acceptable problem-solving. During the 1990-91 school year, over 9,000 youth in custody were provided with educational services.

Dropout Prevention. The Utah Center for Families in Education at the State Office of Education is currently piloting parent involvement activities focused on dropout prevention. The major mechanism being used here is the student education plan (SEP) which is used to help students select realistic goals about their future and to evaluate progress. Research on dropout prevention suggests that these kinds of activities are a factor in encouraging students to remain in school.

GOAL 3: STUDENT ACHIEVEMENT AND CITIZENSHIP

PRESENT PERFORMANCE/STATUS

Statewide Testing Program Results. In the fall of 1990, Utah launched a Statewide Testing Program at grades 5, 8, and 11 using the Stanford Achievement Test. The results for 1990 are presented in Table 1. At all three grade levels, the performance of the state exceeded national performance in mathematics, reading, science, and social science. Fifth grade mathematics and eleventh grade science were particular areas of strength for Utah students when compared to their peers across the nation. The scores of Utah students in the language/English test were substantially below the level of performance attained by Utah students in other areas and were also slightly lower than the national average for all three grade levels. The Statewide Testing Program provides results in these same areas for every school in the state and for each of the nearly 100,000 students tested each year in this program.

ACT Results. Each year approximately 15,000 to 17,000 Utah high school juniors and seniors take the American College Testing Program (ACT) college entrance examination. For any given year, this constitutes about 65-70% of the total number of students graduating in the state. Table 2 shows the state's college-bound students performing at higher levels than their national counterparts on the English, reading, science reasoning and composite ACT scores. An area of concern over the past several years has been the performance of Utah students on the ACT mathematics test. Utah students taking the ACT have under-performed the national group of test-takers on this test of intermediate and higher level mathematics concepts.

Core Curriculum Assessment Program Results. In the spring of 1991, nearly 400,000 criterion-referenced tests were administered to Utah students in the areas of reading, mathematics and science. These criterion-referenced tests are designed to measure specifically what objectives Utah students have and have not attained related to Utah's statewide Core Curriculum. At the elementary levels of 1st grade through 6th grade, Utah students perform well on the Core assessment tests through grade 4 in virtually all areas. Performance in grades 5 and 6 is somewhat lower than in grades 1-4 in the areas of mathematics and science. Secondary results in math and science document useful information to help improve mathematics and science performance in specific courses.

TABLE 1

UTAH STATEWIDE TESTING PROGRAM - FALL 1990

STATE RESULTS FOR MAJOR SUBTESTS

Median National Percentile Ranks for the Total State

Stanford Achievement Test, Eighth Edition

Subtest	Grade 5	Grade 8	Grade 11
Mathematics	60th	53rd	54th
Reading	53rd	55th	58th
Language/English	48th	45th	45th
Science	52nd	53rd	60th
Social Science	55th	50th	56th
Total Basic Battery	53rd	51st	53rd
Students Tested	36,502	33,610	25,482

The National Norm is 50 for each subtest

Source: Utah State Office of Education

TABLE 2

Utah and National ACT Scores For 1990 and 1991

Test	Utah		Nation	
	1990	1991	1990	1991
English	21.1	20.6	20.5	20.3
Mathematics	19.7	19.7	19.9	20.0
Reading	N.A.*	21.9	N.A.*	21.2
Science Reasoning	N.A.*	21.2	N.A.*	20.7
Composite	21.0	21.0	20.6	20.6

*N.A. denotes scores which were not available in 1990 due to the transition from the old ACT to the Enhanced ACT.

Utah score averages are based on all Utah students from the graduating class of 1991 taking the ACT on the five national test dates (15,991 students). National score averages are for all students in the graduating class of 1991 taking the ACT on the five national test dates (796,983) students).

ACT standard scores are based on a scale on which a particular student might obtain a low of 1 up to a high of 36.

Source: American College Testing Program

Course-Taking Patterns of Utah High School Students. Since 1984, the State Office of Education has tracked the course-taking patterns of Utah high school seniors. As of 1990, substantially higher percentages of Utah students are taking at least two years of foreign language, mathematics and science than was true in 1984. Table 3 presents a comparison of 1984 and 1990 Utah course-taking results. Substantial increases have been noted in the percentage of Utah students taking courses such as first and second year algebra as well as geometry and trigonometry. Some increases have also been noted for chemistry and physics. While there are still many areas which could benefit by additional emphasis, the overall pattern indicates that Utah students were taking a much more rigorous program of studies in 1990 than was true at the decade earlier.

Advanced Placement (AP) Performance. Both participation and performance of Utah students in the Advanced Placement program has been extraordinarily high over the last ten years. On the basis of examinations taken per capita, Utah is consistently the first-ranked state in the Advanced Placement program. Thus, a much higher percentage of Utah students take AP exams than any other state in the nation. Table 4 demonstrates that in 1991, 11,586 AP examinations were taken by 7,596 Utah students. This represents an increase in examinations taken of over 300% since 1982 for the state. The 1991 results show that Utah students continued to score very well on a variety of Advanced Placement examinations. Considering all exams taken by Utah students who took the national AP test, over 70% of all exams written by Utah students received a qualifying score sufficient to earn college credit.

EXAMPLES OF UTAH PROGRAMS ADDRESSING GOAL 3

The State Core Curriculum. In the mid 1980's, the State Board of Education established a policy requiring the identification of specific Core Curriculum standards which must be completed by all Utah students in grades kindergarten through twelve. This action was followed by several years of extensive work in developing and refining the state Core Curriculum standards for Utah schools. The Core Curriculum represents those standards of learning that are essential for all students. The Core Curriculum is established for language arts, mathematics, science, social studies, the arts, information technology, healthy lifestyles and vocational education. The State Office of Education provides extensive educator training related to the Core Curriculum. In 1989-90, over 6,000 Utah teachers and administrators received training in Core implementation.

TABLE 3

Comparison of Percentages of Utah High School Students Who Have Taken Specific Courses for 1984 and 1990

Course	1984	1990
Algebra I	78.7%	81.9%
Algebra II	48.2%	63.0%
Advanced Algebra	NA	35.1%
Geometry	48.3%	64.3%
Trigonometry	24.7%	34.4%
Biology	NA	80.1%
Chemistry	26.7%	37.4%
Physics	14.2%	20.4%
Computer-Related Course	28.0%	62.3%
AP History/Social Studies	15.6%	26.7%
AP English	21.0%	24.8%
AP Calculus	10.1%	12.9%
AP Science	10.8%	13.5%
AP Foreign Language	NA	6.4%
AP Music/Art	NA	12.8%
AP Computer Science	NA	3.6%

Source: Utah State Office of Education

TABLE 4

Utah Advanced Placement Participation and Performance, 1982-1991

Year	Total Students	Total Exams Taken	Percentage Qualifying	
			Utah	Nation
1982	2,329	3,094	64.3%	69.8%
1983	2,685	3,669	67.5%	70.3%
1984	3,355	4,695	67.1%	70.0%
1985	4,272	6,148	66.6%	67.2%
1986	4,738	7,010	67.8%	68.7%
1987	5,390	7,970	67.4%	67.7%
1988	5,831	8,954	70.7%	67.3%
1989	6,568	10,030	66.9%	65.3%
1990	6,585	10,126	70.8%	66.4%
1991	7,596	11,586	70.2%	64.0%

*Percentage of exams with a grade of 3 or higher

Source: The College Board

The Core Assessment Program. Directly linked to the Utah Core Curriculum is an extensive system of criterion-referenced tests built to measure student performance in relationship to the Core Curriculum. In 1991, nearly 400,000 Core assessment criterion-referenced tests were administered to Utah students. A sophisticated, mainframe computer-based scoring and reporting system developed by the State Office of Education generates individual student profiles to be used by teachers and students as a basis for further instruction.

Outcome-Based Education. Outcome-based Education is being implemented in every Utah school district to some degree. This approach to teaching and learning stresses teaching to specifically defined instructional objectives and evaluating student performance in relationship to these objectives. Outcome-based Education is a strong companion to the Utah Core Curriculum.

The Utah Nine District Consortium. Nine Utah school districts in conjunction with the State Office of Education are participating as consortium members in the development of a new delivery system for student educational and occupational programs in both vocational and academic education. The concept involves total restructuring of the high school program and environment. Among the specific thrusts in the consortium is an effort to develop, field test and perfect a student occupational plan and work preparation system that is market-driven. The program focuses on providing skills so students can leave school with multiple options for both work and further education.

The Educational Technology Initiative (ETI). During the 1990 legislative session in Utah, the first statewide technology initiative of its kind was passed in the form of House Bill 468. The intent of the legislation was to provide funding over a four year period. This bill appropriated $15 million (the first year) to be used for technology purchases (hardware and software) in the 40 school districts and four universities which have colleges of education. The state funding is matched by local and private sector funding. Total funding for ETI over the four-year period is expected to be $200 million. This specialized funding was to provide a catalyst for change in public education in Utah and to put in place the tools necessary to improve mathematics, reading, language arts and technology literacy. The Technology Initiative is a first step in updating materials and equipment or "the tools of education" needed to prepare teachers and students with the skills they need to compete in today's world.

The Chapter 1 Program. All forty of Utah's school districts operate a program of compensatory/remedial education based on federal Chapter 1 funding and guidelines. During the past school year, some 267 Utah schools operated Chapter 1 programs and over 30,000 Utah students were served in the subject areas of mathematics, reading and other language arts. The availability of Chapter 1 funding is based on both economic and academic criteria.

The Advanced Placement (AP) Program. The Advanced Placement program, sponsored by the College Entrance Examination Board, is designed to assist high schools in the state and across the nation in meeting the needs of academically able students. This includes assisting high schools in developing college-level courses and furnishing a national program of testing, scoring and reporting. The AP program is an excellent means for Utah students to earn significant amounts of college credit while still in high school. Nearly 12,000 Advanced Placement examinations were taken by just under 8,000 Utah students in 1991.

Concurrent Enrollment. Concurrent Enrollment allows high school students to simultaneously earn both high school and college credit. To accomplish this, school districts and colleges and universities work closely together. During the 1989-90 school year, nearly 4,000 Utah students were enrolled in these academically challenging programs.

Gifted and Talented Programs. Gifted and Talented programs for Utah elementary and middle school students are in place in virtually every Utah school district. The goal of these programs is to promote higher levels of attainment in a variety of areas for students with high ability. A wide range of student capabilities and talents are fostered as part of the typical Gifted and Talented program.

The Utah Character Education Consortium. This multi-district Utah consortium is focusing formally on addressing such areas as citizenship and community service as positive elements in the curriculum for students. Currently this program is exploring a variety of ways to foster good citizenship and increase the interest of Utah students in participating in community service.

Special Education Services to Students With Mild and Moderate Disabilities. Services for students with mild and moderate disabilities are being provided statewide as part of Utah's special education effort. The focus of these programs is on reading, math, and science. Services are provided in a variety of settings depending on the individual needs of students. Many districts are involved in an effort to find ways to provide these services to students in the regular classroom setting. Results to date have shown that students achieve at higher levels in all academic areas when services are provided in the regular classroom.

Early Intervention for Ensuring Students Success. This program is a joint effort among Health, Education and Human Services agencies. The project is geared to meet the needs of students at risk and their families during the early elementary years of kindergarten through grade three. At present some 35 schools are participating in the project over a three-year period. In all schools the emphasis is on collaboration among service providers so that the variety of needs of children and their families are addressed.

GOAL 4: SCIENCE AND MATHEMATICS

PRESENT PERFORMANCE/STATUS

Science and Mathematics From the Statewide Testing Program. Utah's Statewide Testing Program mathematics results from the fall of 1990 showed Utah 5th graders scoring at a median national percentile rank of 60. Median performance of 8th graders was the 53rd percentile, while 11th graders scored at the 54th percentile. Performance at each of these three grade levels was higher than the national norm. In the area of science, Utah 5th graders scored at the 52nd percentile, with 8th graders at the 53rd percentile. Eleventh grade science results were at the 60th percentile for the total state.

Science and Mathematics Performance From the Core Assessment Program. In addition to the norm-referenced testing accomplished as part of the State Testing Program, Utah has in place an ambitious program of criterion-referenced testing. The Core Assessment Program is linked specifically to the state's Core Curriculum and results are reported for each of the major Core Curriculum concepts at each grade level. Statewide mathematics results for Utah 5th and 6th grade students in 1990 demonstrated very adequate performance on some Core concepts but areas of deficiency in others. Of particular concern was the performance of 5th and 6th grade students on such concepts as the addition and subtraction of fractions as well as multiplication and division of fractions. Still another source of concern for Utah mathematics educators is mathematics problem-solving. Performance of Utah students in items involving more "real world" mathematical reasoning skills was substantially below other areas tested. Core assessment results in the area of science showed that Utah students in grades 1-4 demonstrated substantial mastery of Core science concepts. Performance at grades 5 and 6, however, was lower. Such concepts as forms of energy, the nature of matter, temperatures/heat and identification and classification of plants exhibited lower levels of performance than other science concepts tested.

Utah ACT Science and Mathematics Performance. Over a 20 year period, the performance of Utah students on the American College Testing Program has tended to be above the level of the national group of test-takers in spite of the fact that a very high percentage of Utah students (65%-70%) elect to take the ACT. Performance of Utah students on the ACT science and science reasoning tests has been a particular strong point with the state realizing levels of performance much in excess of national averages. The ACT mathematics score is the only area of the test where Utah

students consistently score below the national average. Since the ACT mathematics score is composed largely of content taken from introductory algebra, geometry and intermediate algebra, this pattern of results is of substantial concern.

Advanced Placement Science and Mathematics Results. 1991 Advanced Placement test results reported by the College Board show Utah students performing very well on such AP tests as biology, chemistry, physics and calculus. Well over 2,000 Utah students earned significant amounts of college credit in the areas of Advanced Placement science and mathematics as a result of high levels of test performance in these areas.

Course-Taking Patterns in Mathematics and Science. Since 1984, the Utah State Office of Education has been tracking the course-taking patterns of Utah high school seniors. In general, the enrollment of Utah high school students in courses in the typical college-preparatory math sequence has risen substantially between 1984 and 1990. This trend is particularly strong for intermediate algebra and geometry. However, at least slight increases were noted for every mathematics course between 1984 and 1990. In the area of science, both chemistry and physics have demonstrated modest increases in enrollment between 1984 and 1990. Biology remains the state's most popular science course with over 80% of Utah students taking this course.

Percentage of Mathematics and Science Teachers With a College Major in Their Field. A 1991 report from the Council of Chief State School Officers noted that 32% of Utah teachers whose primary assignment is mathematics have a college major in that field. This contrasts with a national figure of 47%. In science, 57% of the teachers whose primary assignment is science hold a college major in that field in the state. This compares with a national level of 66%. Utah's program of subject-specific endorsements is a major effort to increase the pool of qualified teachers in these areas.

EXAMPLES OF UTAH PROGRAMS ADDRESSING GOAL 4

The Core Curriculum in Mathematics and Science. As with other areas of the curriculum, the objectives-based, statewide Core Curriculum is in place for mathematics and science for students in Utah's public education system in kindergarten through twelfth grade. The policy which initiated the Core Curriculum also required that Utah secondary teachers have subject-specific endorsements in their teaching areas. Those endorsements certify competency in a specific field.

The Educational Technology Initiative in Mathematics and Science. As described under Goal 3, the Educational Technology Initiative is a major Utah effort to infuse the most up-to-date instructional technology into the classroom. Mathematics and science are two of the critical areas which will benefit from the implementation of a wide array of educational technology ranging from computer-assisted instruction to the use of video discs.

Statewide Inservice Training for Teachers of Mathematics and Science. The Utah State Office of Education and the Utah System of Higher Education are using both state and federal funds to address inservice training priorities. These priorities include retraining of science and mathematics teachers, development of secondary school building inservice leaders and implementation of a teacher/specialist program for elementary schools. During 1990-91, 550 teachers of mathematics and 460 teachers of science participated in these training activities statewide.

The Utah Mathematics Coalition. This organization has been organized with members from business, public education, private education and colleges and universities. A major thrust of the Coalition has been an effort to link mathematics education and the needs of business and industry.

Subject-Specific Endorsements. In addition to qualifying to teach mathematics and science classes on the basis of holding an academic major or minor, Utah teachers may obtain an endorsement in these areas by participating in inservice training and demonstrating proficiency in their specific fields. This effort has resulted in expanding the pool of mathematics and science teachers by over 800 since 1987.

The Utah Math/Science Network. The Math/Science Network offers a program for junior and senior high school students (particularly young women) which helps them become more aware of and more skillful in mathematics and science. The Math/Science Network sponsors major conferences for young women which are held in virtually all Utah institutions of higher education. Conference goals include the following:

- To increase young women's interest in mathematics and science.
- To foster awareness of career opportunities for women in math and science-related fields.
- To provide students an opportunity to meet and form personal contacts with women working in math and science-related occupations.
- To assist parents and educators who want to encourage young women to pursue math and science educational and career interests.

The Mathematics, Engineering, Science Achievement (MESA) Program. The purpose of the Utah MESA Program is to increase the participation of African Americans, Hispanics, Native Americans, Pacific Islanders and non-minority women in the fields of math, science, engineering and related professions. The goal of the program is to enrich the academic experiences of both junior and senior high school students in math and science and to stimulate their interest in these fields as well as to encourage the students to graduate from high school prepared for the challenge of university studies. During 1989-90, the program served 608 students in 14 schools located in four Utah school districts.

GOAL 5: ADULT LITERACY AND LIFELONG LEARNING

PRESENT PERFORMANCE/STATUS

Literacy Estimates for Utah and the Nation. Estimates of Utah's literacy rates in a variety of federal studies place the state in a rather positive position. Although there are no universally accepted definitions of literacy, high school graduation is often used as an indicator in this area. The 1980 Census showed that 80% of Utah adults over the age of 25 held a high school diploma. This ranked the state 2nd in the nation on this dimension. In spite of this enviable showing, a variety of other estimates based on state and national information would suggest that between five and ten percent of Utah's adult population do not possess sufficient verbal and mathematics skills to function well in everyday life. Another positive indicator in this area is the Census information on median years of education. Utah has had the highest median years of education of any state in the nation for the last three Census periods ending in 1980.

Census Indicators of College Completion. The 1980 Census provides information concerning the amount of college completed by the Utah adult population. 44.1% of Utah adults in 1980 had completed between 1 and 3 years of college. This ranked the state 1st among the 50 states in this category with the national average at 31.9%. Utah also does well in the percentage of its adult population completing four or more years of college. As of 1980, the state had 19.9% of its adult population complete at least four years of college. The latter figure ranked Utah 8th in the nation and compared with a national percentage in 1980 of 16.2%.

Public Higher Education Enrollment. During the 1989-90 school year, 62,378 students were enrolled in Utah's public system of higher education on a full-time equivalent basis.

EXAMPLES OF UTAH PROGRAMS ADDRESSING GOAL 5

Adult Education. During 1989-90, almost 25,000 Utah adults attended adult basic and adult high school education classes. For this same period of time, 1,257 adults received high school diplomas. The purpose of Utah's adult education programs is to provide growing numbers of Utah citizens with the tools to become literate, self-reliant and productive citizens.

Applied Technology Centers. Utah's system of Applied Technology Centers has developed a remarkable partnership and collaboration between public education, higher education, state government and business. The five area technology centers across the state enable both high school students and adults with varying backgrounds, needs and aptitudes to obtain diverse, quality training for employment in the businesses and industries of the state. The following are the key characteristics of the programs provided by Utah's Applied Technology Centers:

- Career assessment and guidance
- Job skills training for both high school students and adults
- An open-entry/open-exit program where trainees may start anytime and leave when training is completed
- Proficiency-based programs
- Personalized training plans
- Flexibility in responding to local labor-market needs
- Intensive, job-specific training
- Job placement

Custom-Fit Training. The Custom-Fit Training Program administered by the State Office of Education assisted over 65 new and 135 expanding companies during 1989-90 by training over 3,000 of their new employees. Training in this program is geared specifically to the needs of companies.

Community Education. Virtually every Utah school district is involved in some aspect of community education. This includes preschool, kindergarten through grade twelve, and programs for adults. Statistics compiled by the State Office of Education showed nearly 800,000 Utahns of all ages participated in some aspect of community education during the 1989-90 period.

Lifelong Learning and the Utah System of Higher Education. The Utah System of Higher Education consists of nine public colleges and universities governed by the State Board of Regents. The system includes two major research/teaching universities, two metropolitan/regional universities and five community colleges. Both in terms of academic emphasis and geographic distribution, Utah's colleges and universities serve Utah's expanding needs for higher education. All of Utah's public colleges and universities and many private schools offer extensive continuing education programs to promote lifelong learning.

GOAL 6: SAFE, DISCIPLINED AND DRUG-FREE SCHOOLS

PRESENT PERFORMANCE/STATUS

Documentation of Youth Risk Behavior. A 1991 study conducted by the Health Behavior Laboratory at the University of Utah documented a variety of findings related to Utah youth risk behavior. Among the important findings of this study were the following:

- 24.8% of all students reported that at least once in the past 30 days they had been in a car driven by someone who had been drinking.
- 20.8% of all male students and 2.3% of all female students reported carrying a weapon more than 5 days during the past 30 days.
- 15.3% of all students responded that they smoke regularly.
- 8.2% of all students reported they had had 5 or more alcoholic drinks in a row on 3 or more days during the past month.
- 3.2% of all students reported having smoked marijuana regularly.

Drug Use Among Utah Students. A 1989 study by Stephen J. Bahr surveyed 43,000 Utah students in grades 5-12. Among the studies findings were the following: For students in grades 11 and 12, one in three of these students had consumed alcohol during the past month, one in five had used tobacco, one in ten had used marijuana, one in 20 had taken amphetamines and one in 50 had used cocaine. The study went on to point out that alcohol, tobacco, marijuana, cocaine and inhalants were used less frequently by high school seniors in the state of Utah than by seniors across the nation. Similar patterns of usage between Utah and national high school seniors were noted in the proportion using amphetamines, barbiturates, tranquilizers, heroine, LSD and PCP. The study also noted that adolescent drug use in Utah has declined somewhat during the past five years and is overall less than the nation as a whole. Still, substantial numbers of Utah adolescents live in a setting where they are exposed to illegal drug use regularly. More than one third of the Utah students in grades 7-12 said they personally knew someone who regularly used illegal drugs.

Juvenile Crime Rates. The Utah Department of Public Safety's 1990 report on crime in Utah indicated that in Utah, as in other states, a significant proportion of total crimes are committed by juveniles. The report demonstrates that juvenile arrests account for 35% of the total reported arrests made in 1990. For many crimes, the number of juveniles being arrested exceeds the number of adult arrests in spite of the fact that most juveniles arrested are 14 through 17 years of age.

EXAMPLES OF UTAH PROGRAMS ADDRESSING GOAL 6

Alcohol, Drug and Violence Prevention Programs in Utah Schools. A recent report published by the State Office of Education shows that there are no fewer than 39 programs impacting the public schools in the areas of alcohol, drug and violence prevention. These programs fall into several different categories including curriculum programs, peer programs, parent education programs and general programs. The following examples illustrate the nature of programs in these categories:

- The Utah K-12 Alcohol, Drug and Tobacco Prevention Education Program. This effort includes 3-day teacher inservice training provided by local substance abuse authorities/school districts. Materials are developed by the Utah State Office of Education, the Division of Substance Abuse and the Department of Health. This program is currently operative in all 40 Utah school districts. A 1990 external evaluation of this program indicates that its cumulative efforts are positive and significant.

- The Governor's Youth Council on Alcohol and Drugs. This program, which is sponsored by the Governor's Office and the State Division of Substance Abuse, provides an opportunity for youth input and involvement in program planning and implementation in the areas of alcohol and drug abuse prevention. This effort encompasses all 40 Utah school districts.

- Parent Education Resource Centers. Sponsored by the Governor's Office, the State Division of Substance Abuse and local school districts, programs like the Parent Education Resource Centers provide parent education and training to accompany school programs to help generate parent support and involvement.

OTHER IMPORTANT UTAH EDUCATIONAL REFORM PROGRAMS

In addition to the programs which have been highlighted in relationship to each of the six national educational goals, Utah has implemented a variety of reform programs geared to meet its special circumstances as a state.

Many of the programs already highlighted in the present report are responsive to the overall Utah reform effort. Highlighted below are several reform programs which have not been summarized previously in this report but are key aspects of Utah's continuing educational reform efforts.

- The Career Ladder Program. The purpose of the Career Ladder Program, enacted by the state Legislature in 1983, is to attract and retain good teachers and to improve the quality of schools in Utah. Strategies in this program considered essential for school reform include: (1) greater financial and career incentives to keep good teachers in the classroom; (2) more and better teacher evaluations to improve the quality of teachers; and (3) better use of teacher talents outside the classroom. This major Utah reform effort has been funded at slightly more than 34 million dollars per year from 1986 through the present.

- The Incentives for Excellence in Public Schools Program. This effort provides a means to promote stronger partnerships between education and private enterprise for enhancing educational excellence. The basis of the program is a legislative appropriation available to school districts which can match the legislative funds from private sources. Funds generated can be used for programs, practices, learning materials and equipment which have direct impact on the instruction of students.

- The Productivity Project Studies/Instructional Program. Productivity as it is used in the context of this program means improving the quality of educational programs while serving more students with the same or less money or serving the same students with less money. Productivity projects were most recently funded in the following areas:

  - Innovative/differentiated staffing producing more efficient and cost-effective instruction.

  - Accelerated pace programs which help students to accelerate completion of state and local graduation requirements.

  - Scheduling options that serve students through innovative and cost-effective restructuring of classroom schedules.

  - Home/school community partnerships.

School/classroom management programs which reduce administrative time and cost and allow more resources for effective instruction.

The Technology-Instruction Program. This effort provides funding for educational technology and new delivery systems for instructional management, curriculum support and teacher-student-parent feedback and reporting systems.

The Year-Round School and Effective Facility Use Program. This program has funded a variety of projects related to increasing the capability of Utah schools to accommodate a burgeoning enrollment. The program has had a profound impact on traditional school scheduling in the state. As of September 1991, 66 elementary schools, four middle schools, and one high school in 11 districts across the state were operating year-round scheduling patterns. In addition, 31 elementary schools across the state were operating extended-day or modified multiple session programs. Together, the year-round schools and the extended-day schools serve over 80,000 students.

Utah Partnership for Educational and Economic Development. The Utah Partnership is a cooperative effort on the part of education, business and government to strengthen human resources through educational opportunities and economic development in the state. The Partnership is a concept developed by the Utah Task Force on Education and Economic Development. The Partnership is currently pursuing five major objectives. These include:

- Market-driven training
- Improved basic education
- Better utilized resources
- Enhanced research and development efforts
- Improved image

The Educational Technology Initiative is a major area of focus for the Partnership.

BEYOND THE NATIONAL GOALS: STRATEGIC EDUCATIONAL PLANNING IN UTAH/A SHIFT IN FOCUS

In 1989, Utah began a major effort in educational strategic planning. This effort began with the "Shift in Focus" initiative by the State Board of Education and quickly lead to a very wide-based strategic planning effort involving many segments of the educational, business, political community and the public at large.

Mission Statement. Public education's mission is to assure Utah the best educated citizenry in the world, and each individual the training to succeed in a global society, by providing students learning and occupational skills, character development, literacy and basic knowledge through a responsive statewide system that guarantees local school communities autonomy, flexibility and client choice, while holding them accountable for results.

Objectives for Public Education in Utah.

- 100% of Utah's students will achieve the objectives of their individually developed educational/occupational plans.
- Each student departing the public schools will achieve success in productive employment and/or further education.
- Utah education will be the standard worldwide.
- Utah will achieve the highest per household income in America.

Strategies in Education for Utah.

1. Redesign the educational system, its organization, laws and funding formulas, including removing state and local barriers, to achieve our mission and objectives.
2. Develop a world-class curriculum that enables students to successfully compete in a global society.
3. Energize Utah's system of public education by attracting and retaining educators from among the best and brightest citizens through an aggressive plan to elevate its stature as a profession and compensate in a competitive way.
4. Empower each school to create its own vision and plan to achieve results consistent with the mission and objectives of Utah public education.

5. Create the environment and provide the training necessary for school communities to achieve their mission.

6. Employ technology to restructure and improve the teaching/learning process and its delivery.

7. Install an assessment information retrieval system that will provide students, parents and educator with reliable, useful and timely data on the progress of each student.

8. Educate all stakeholders on the mission and objectives of public education in Utah.

9. Personalize education for each student.

10. Support research and development throughout the system with emphasis on initiatives at the local school level.

11. Expand and strengthen school/business partnerships that support the mission.

THE GREAT SEAL OF THE STATE OF UTAH
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